

Wisconsin Crop Manager

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Harvest Considerations for Variable Soybean Maturity

Shawn Conley, Soybean and Wheat Extension Specialist

Variable soil types, knolls, and drought have left some growers with extreme in-field variability of soybean maturity. There are areas in fields where the soybean seed is 13% or less moisture adjacent to areas with green seed. The prevailing question is "When should the grower harvest?" Obviously there is no simple answer, as each field is different. However here are a set of guidelines to consider:

1. The easiest answer is harvest the field at two different times. Take what is dry today and come back in two weeks and harvest the rest. The challenge with this approach is that today's equipment is large and not easily moved from field to field. Furthermore many growers rent or own land over large areas where this is impractical and the whole field must be taken at once. So.....

2. The next simple answer is wait until the whole field is ready to go. As noted in our article Drought Induced Shatter, we are seeing areas across the Midwest where shattering is occurring. The general rule of thumb is 4 seeds per square foot = one bushel yield loss. At local cash prices surpassing \$13.00 per bushel this is hard to see happen and not harvest. Furthermore, waiting will also lead to moisture loss in the field. As we learned last year, you do not get compensated for harvesting below 13% moisture. So.....
3. If growers are concerned with shatter and/or other harvest losses the next logical approach is harvest ASAP. This opens a whole new can of worms. Harvesting ASAP will lead to a mixture of dry, wet, and immature (green) soybean seed. Be aware that if you harvest this mixture regardless of the ratio, your combine moisture sensor may not detect the correct moisture, be prepared for that initial shock when the elevator tests the grain. Next be prepared for the dockage. Most combines will leave more beans in the pod when they are wet or immature. These beans may end up on the ground or in the grain tank as unthreshed soybeans. Harvesting seed with this variability will be very similar to handling frosted soybean seed so discounts may occur due to moisture shrink, damage (green beans are considered damage), foreign material (this is usually higher when harvesting wet beans), test weight, and heating. If you choose on farm storage to address some of the dockage concerns please refer to Soybean Drying and Storage for questions.
4. The last consideration I would bring forward is that the mature areas are likely going to be the low yielding pockets due to drought whereas the yet to mature areas will likely be the higher yielding areas within the field. So, in short, which yield environment would you rather focus your time and efforts to protect?

The question ultimately comes down to the bottom line and where you make the most \$\$\$\$. If shatter is not occurring and you have good equipment that does not incur significant harvest loss, will harvesting grain that is over-dry make you more money than harvesting seed that may incur significant dockage? My guess is yes but you tell me!



Image 1. Variable Maturity (M. Rankin)

Fall is Still a Good Time to Sample for SCN and Other Plant Parasitic Nematodes

Shawn Conley, Soybean and Wheat Extension Specialist

The WI Soybean Marketing Board (WSMB) sponsors free nematode testing to help producers stay ahead of the most important nematode pest of soybean, the soybean cyst nematode (SCN). Eggs of SCN persist in the soil between soybean crops so a sample can be submitted any time that is convenient. The soil test report indicates the number of eggs in the sample and is useful for selecting the right variety for the next soybean crop. Retests of fields planted with SCN-resistant varieties over multiple years shows how the nematode population is responding to variety resistance and provides an early warning should the nematode population adapt to host genetics.

In the spring of 2012, the WSMB expanded the nematode testing program to include other pest nematodes in addition to SCN. These nematodes are less damaging to soybean than SCN but can cause enough yield loss to warrant treatment. As is the case for SCN, there are no rescue treatments for nematodes so the primary purpose of this year's soil test is to plan for next year's crop. Soil samples collected in corn for nematode analysis have predictive value for explaining yield if they are collected before the corn V6 growth stage. Sampling early in the season will provide information about the risk potential for the current corn crop AND the next soybean crop.

The assays used to recover nematode pests other than SCN in soil require that the nematodes are alive. So, it is important to keep the samples moist and at least room temperature cool. Collecting a sample that includes multiple cores ensures that there will be plenty of root pieces to assay. It is not necessary to include live plants in the sample. The soil test report will indicate which pest nematodes are present and at what quantities and their damage potential to soybean and corn based on the numbers recovered.

Free soil sample test kits are available now and can be requested from Jillene Fisch at (freescntest@mailplus.wisc.edu) or at 608-262-1390.

For more information on SCN testing and management practices to help reduce the losses from this pest, please contact: Shawn Conley: spconley@wisc.edu; 608-262-7975 or visit www.coolbean.info.

Remember the first step in fixing a nematode problem is to know if you have one! The WSMB sponsored nematode testing program provides you that opportunity.

Learn Not to Burn During this Busy Harvest Season

John Shutske, UW-Madison Biological Systems Engineering, Associate Dean for Extension and Outreach, CALS

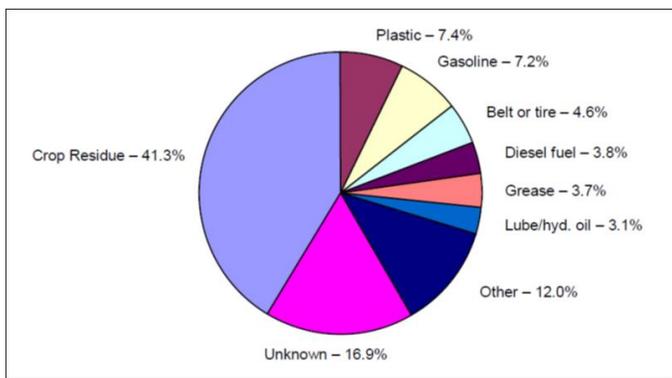
The late September USDA crop report for Wisconsin shows that we are a bit behind average on harvested acres for corn and soybeans and well behind last year's drought-induced early harvest. So, October promises to be a bit rushed for many growers, and conditions appear to be relatively more dusty this fall. Time will be critical, and it's also crucial that you avoid a costly and potentially devastating combine fire!

A 2002 study showed that crop residue is the material most often first involved in a grain combine fire. Our study of almost 9,000 fires also showed that more than 75% of fires start in the engine compartment, though they tend to often rapidly spread to other parts of the machine. Fires become especially severe when fuel lines rupture from the heat or hydraulic hoses are compromised. When tires become involved in a fire, the result is almost always a near total loss.

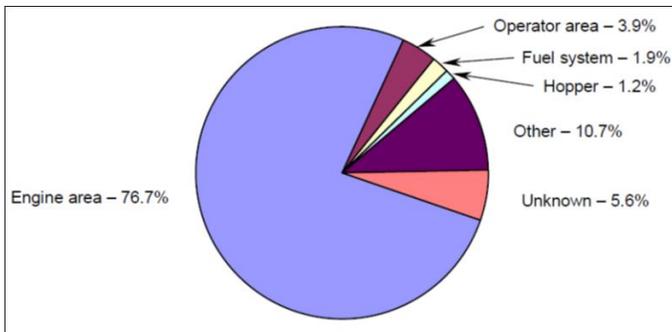
Based on what we know, the most critical information is to keep your engine compartment clean of all crop residue and any buildup of greasy/oily material. Different machines have different "patterns" for crop residue buildup in the engine area. This can even change a bit from year to year as a result of conditions (wind, relative humidity, and dustiness). Take time to blow out or find other ways to remove any buildup of crop trash daily or as is needed. All fires need an ignition source. Often, exhaust components (turbochargers, manifolds, mufflers) are involved, but faulty bearings or malfunctioning electrical systems can also be the culprit.

All grain combines need to be equipped with at least two 10-pound ABC dry chemical fire extinguishers. Larger ones are even more preferable, though they are a little more clumsy to handle. Avoid new "high tech" fire suppression liquids (that I often see being sold in spray cans at farm and machinery shows) unless they are tested and explicitly approved for dry, cellulosic-type material (crop residue) AND liquid fuels by Underwriter's Laboratory. The "ABC" compound means the extinguisher will work on Class A crop residue, Class B flammable liquids, and is non-conductive so it can be used on electrical components.

If you do experience a fire, pull away from the standing crop and shut the machine down. Call for help. Use your extinguisher(s) with great care and fight the fire by aiming at the base of the flames. Again, the engine must be shut off or air movement will simply fan the fire and blow the extinguishing powder out. Also, if you experience even a small fire that you are able to put out, correct the problem that caused it before you resume and make sure to contact your insurance company. Harvest is the most dangerous time of the year. Be proactive and careful to protect your safety and your investment!



First Material to Catch Fire in 8,927 U.S. Grain Combine (Harvester) Fires



Fire Origin Location for 8,927 U.S. Grain Combine (Harvester) Fires

Reference

Venem, M.T., W. Gilbert and J. Shutske. 2002. Combine Fire Prevention Summit. ASAE Paper No. 028017. St. Joseph, Mich.: ASAE.

Protect Your Health When It's Dusty

John Shutske, UW-Madison Biological Systems Engineering, Associate Dean for Extension and Outreach, CALS

Dusty combining conditions have been observed and reported during the last couple weeks of soybean (and corn) harvest in Wisconsin. Combine operators are far better protected with modern cab air filtration and handling systems than in the past, but dusty conditions still present health concerns for some.

Outside of a combine's cab, most research shows that dust concentrations are at least 20 mg/m³ though I would estimate that some of the conditions I've seen in the last week would have had concentrations at least two or three times that level. Fortunately, a well-sealed cab and a quality air filter (filtering air coming into the cab) will reduce dust levels down to 0.5 to 1 mg/m³ which is much more comfortable and healthy for the operator.

Field dust from soybeans, corn, and other field crops is complex. It consists of inorganic soil particles, organic plant pieces, mold spores, insect parts (and excreta), endotoxins, and

bacteria. Smaller dust particles can be breathed deep into the lungs and can cause damage.

Respiratory illness from grain and other agricultural dust exposure is well-known to physicians in rural areas and can include severe allergic reactions and a reaction known as "organic dust toxic syndrome" (or ODTS). Nearly everyone exposed to a day's worth of dusty conditions will report some range of symptoms such as a runny nose, mild sore throat, coughing, and general feelings of tightness or feeling stuffed-up. Some people develop different forms of bronchitis and dusty conditions can be debilitating for people with asthma.

Here are a few important things you can do to protect your health while operating a combine:

- Make sure you have the correct air filter in place and that it's clean and properly installed. Several manufacturers sell heavy duty filters which are more efficient and will filter out a larger fraction of small particles. These are more expensive, but may be worth it if you have sensitivity to dust.
- When installing/cleaning your air filter, make sure gaskets are snug and in place. If you pull a filter out to clean it, make sure not to damage it (such as using too high of a compressed air pressure). Likewise, make sure your cab door latches firmly and that all rubber gaskets around windows and doors are in good shape. Keep the inside of the cab as clean as possible so you're not blowing dust around your operating space.
- Even if you're not driving the combine, do as much as possible to avoid clouds of dust. If you're driving a truck or tractor/wagon combination, take the same precautions making sure to have windows shut and the fan on to create positive pressure to keep dust out.
- If you feel the effects of dust exposure and symptoms do not go away a day or two after exposure OR if they become worse (coughing, difficulty breathing, increasing amounts of phlegm, etc.) make sure to see a doctor or other qualified health professional. Realize that people can become more and more sensitive with repeated exposures to grain dust, so it's wise to take steps to protect yourself.



Photo Credit: Soybean Harvest by United Soybean Board Attribution-NonCommercial License

Evaluating On-Farm Test Plots

Joe Lauer, Corn Agronomist



Wisconsin farmers are in the thick of corn harvest. With the delayed frost, some are finishing up silage harvest, while others have begun grain harvest. Early yield indications are good in many areas that had reasonable spring planting dates. Average yields of hybrids grown in the early- and late-trials at Galesville were 221 and 234 bu/A. However, the trials at Marshfield we had to abandon due to June flooding, and the trials at Chippewa Falls will be quite variable due to drought.

This is also the time of year when on-farm strip plots are evaluated. Field variability alone can easily account for differences of 10 to 50 bushels per acre. Be extremely wary of strip plots that are not replicated, or only have "check" or "tester" hybrids inserted between every 5 to 10 hybrids. The best test plots are replicated (with all hybrids replicated at least three times).

Don't put much stock in results from ONE LOCATION AND ONE YEAR, even if the trial is well run and reliable. This is especially important in years with tremendous variability in growing conditions. Years differ and the results from other locations may more closely match your conditions next year. Use data and observations from university trials, local demonstration plots, and then your own on-farm trials to look for consistent trends.

A few suggestions on how to evaluate research test plots:

1. Walk into plots and check plant populations. Hybrids with large ears or two ears per plant may have thin stands.
2. Scout for pest problems. Hybrid differences for pest resistance and tolerance should be monitored and noted all season, but will be most apparent in the fall. Counting dropped ears is a good way to measure hybrid ear retention and tolerance to European corn borers.
3. Check for goose-necked stalks. This is often root pruning caused by corn rootworms. Hybrids differ in their ability to regrow pruned roots.

4. Find out if the seed treatments (seed applied fungicides and insecticides) applied varied among hybrids planted, e.g. were the hybrids treated with the same seed applied insecticide at the same rate? Differences in treatments may affect final stand and injury caused by insects and diseases.
5. Differences in standability will not show up until later in the season and/or until after a wind storm. Pinch or split the lower stalk to see whether the stalk pith is beginning to rot.
6. Break ears in two to check relative kernel development of different hybrids. Hybrids that look most healthy and green may be more immature than others. Don't confuse good late season plant health ("stay green") with late maturity.
7. Visual observation of ear-tip fill, ear length, number of kernel rows, and kernel depth, etc. don't tell you much about actual yield potential. Hybrid differences are common for tip kernel abortion ("tip dieback" or "tip-back") and "zipper ears" (missing kernel rows). Even if corn ear tips are not filled completely, due to poor pollination or kernel abortion, yield potential may not be affected significantly, if at all, because the numbers of kernels per row may still be above normal.
8. Be careful with test plots consisting predominately of one company's hybrids. Odds are stacked in their favor!

Sorghum and Sorghum-sudangrasses and Frost

Dan Undersander, Forage Agronomist

Sorghum and sorghum-sudangrasses crosses may be poisonous if grazed or fed improperly. The danger of prussic acid poisoning is greatest for forage sorghum varieties, less for sorghum-sudangrass crosses, and least for sudangrasses.

The young, dark green growth or regrowth (less than 18 to 24 inches) the most dangerous stage. Shortly after frost, prussic acid release potential increases slightly. However, they can be safely grazed a few weeks after freezing if there is no substantial regrowth.

To view the full PDF article follow the link below or scroll down to the end of this newsletter.

http://www.uwex.edu/ces/forage/pubs/prussic_acid.pdf

First Announcement for the 2014 Wisconsin Corn Conferences

Joe Lauer, Corn Agronomist

Hold the dates of January 28-30, 2014 for the Wisconsin Corn Conferences

Profitable corn production is extremely important to Wisconsin agriculture. Farmers today must be well informed

about new technologies to be profitable. These Corn Conferences are designed to provide technical insight, practical advice and interaction with university and industry experts and fellow growers. Watch for a conference coming to a town near you.

CCA Internship Report: Summer 2013

Jeff Breuer, CCA Director and Arlington ARS Assistant Superintendent.



Pictured is Ben Ehlert, CCA Intern, assisting with data collection on a crop rotation study.

The Wisconsin Certified Crop Advisers Board of Directors sponsored a Crop Scout Internship this summer. Ben Ehlert from Pardeeville, was the first recipient of this pilot program. Ben is a college student enrolled in agriculture and general courses who is pursuing a degree in horticulture.

Ben received crop scout training at the UW Arlington Ag Research Station focusing on crop pest scouting, crop development stages, weed identification, ag safety and equipment operation. Ben also was introduced to agronomic crop research while assisting with the WI Intergrated Crop Rotation Systems Trial and Drs. Cullen and Murrell's entomology studies. Professional career experiences were provided through job shadowing with CCA Carl Nachreiner, Landmark Co-op Agronomist, as well as George Koepp, UWEX Columbia County Ag Agent and Kurt Calkins, Columbia County Land & Water Conservation Department Director. He assisted with various research station activities including preparations for and attending several field day events.

Special thanks to the Wisconsin Certified Crop Advisers Board of Directors for sponsoring this internship. Future plans will be discussed as the CCA Program supports the educational development and professional experiences of new crop consultants entering the industry.

Pest Management Update Meeting Reminder

Eileen Cullen, Extension Entomologist

We hope that you will be able to attend the UW-Extension Pest Management Update meetings coming up November 2013. The full schedule with dates, meeting locations, topics and registration contact information were announced in the [September 25th issue of the Wisconsin Crop Manager](#). Here is a quick recap. Please register with the host agent at least 1 week prior to the meeting at the location you wish to attend.

Note that the location sequence changes a bit from year to year based on logistics. Be sure to look at the 2013 schedule included with this article when selecting your preferred date and location. Please attend the meeting location at which you registered. Each meeting in the series is a separate county-based event and host agents cannot interchange registrant fees or meal counts.

Four hours of CCA CEU pest management credits are requested and available at each location.

The speakers will be extension specialists Mark Renz, weed scientist, perennial cropping systems; Vince Davis, weed scientist, annual cropping systems; Eileen Cullen, field crop entomologist, and Damon Smith, field crop plant pathologist.

2013 Pest Management Update Topics:

Weed Management: *Annual Crops:* 1) New herbicide updates 2) Efficacy and fit of pyroxasulfone products 3) Late season weed survey and herbicide resistance in WI update. *Perennial Crops:* 1) New weeds invading your forage crops 2) Benefits of managing weeds in establishing alfalfa 3) Alfalfa stand removal with herbicides 4) Pest Management Mobile, a new resource for key pesticide information in Wisconsin Agronomic Crops.

Disease Management: 1) New fungicide products in field crops 2) Utility of fungicides in field crops 3) Head scab and other wheat disease updates 4) 2013 soybean diseases in Wisconsin 5) Roundup Ready alfalfa and *Aphanomyces euteiches* Race 2 resistance.

Insect Management: 1) New insecticide and Bt trait updates 2) Bt corn rootworm resistance and trait stewardship 3) Impact, management and range expansion of Brown Marmorated Stink Bug in field crops 4) Seasonal fluctuation and research updates for soybean aphid, Japanese beetle, and western bean cutworm 5) Pest Management Mobile, demo of insecticide and Bt trait features.

2013 Wisconsin Pest Management Update Meetings

The schedule for the Wisconsin Pest Management Update meeting series is listed below. Presentations will include pest management information for Wisconsin field and forage crops. Speakers will include Mark Renz and Vince Davis, weed scientists, Damon Smith, plant pathologist, and Eileen Cullen, entomologist.

All meetings will start with check-in registration and coffee at 9:30 a.m. Presentations start promptly at 10 a.m. and will conclude by 3:00 p.m. Four hours of Certified Crop Advisor CEU credits in pest management are requested for each session. The \$40 registration fee per participant includes a noon meal and information packet.

Please make your reservation with host agent one week prior to the scheduled meeting date.

DATE	LOCATION	HOST AGENT
Monday November 11	<u>Marshfield</u> Marshfield Agricultural Research Station 2611 Yellowstone Drive Marshfield, WI 54449	Richard Halopka Clark County Extension Courthouse Room 104 517 Court Street Neillsville, WI 54456 (715) 743-5121
Tuesday November 12	<u>Chippewa Falls</u> Lake Hallie Eagles Club 2588 Hallie Road Chippewa Falls, WI 54729	Jerry Clark Chippewa County Extension 711 N. Bridge Street Chippewa Falls, WI 54729 (715) 726-7950
Wednesday November 13	<u>Sparta</u> Jake's Northwoods 1132 Angelo Road Sparta, WI 54656	Bill Halfman Monroe County Extension 14345 County Hwy B Sparta, WI 54656 (608) 269-8722
Thursday November 14	<u>Arlington</u> Arlington Agricultural Research Station Public Events Building N695 Hopkins Road Arlington, WI 53911	George Koepf Columbia County Extension 120 W. Conant St., Ste. 201 Portage, WI 53901 (608) 742-9682
Monday November 18	<u>Fond du Lac</u> University of Wisconsin – Fond du Lac Rm 113 University Center 400 University Drive Fond du Lac, WI 54935	Mike Rankin Fond du Lac County Extension 227 Admin/Extension Bldg. 400 University Dr. Fond du Lac, WI 54935 (920) 929-3170
Tuesday November 19	<u>Green Bay</u> Rock Garden (at the Comfort Suites Hotel) 1951 Bond Street Green Bay, WI 54303	Contact: Kathy DeChamps Ag & Extension Service Center 1150 Bellevue St Green Bay, WI 54302 (920) 391-4653
Wednesday November 20	<u>Belmont</u> Belmont Inn & Suites (formerly Baymont Inn) 103 West Mound View Avenue Belmont, WI 53510	Ted Bay Grant County Extension P.O. Box 31 Lancaster, WI 53813 (608) 723-2125
Thursday November 21	<u>Janesville</u> Ramada Inn (formerly America's Best Value Inn) 3900 Milton Avenue Janesville, WI 53546	Jim Stute Rock County Extension 51 S. Main Street Janesville, WI 53545 (608) 757-5696

2013 CCA Pre-Test Training Webinar Series

Bryan Jensen, IPM Program

The University of Wisconsin Cooperative Extension Service and the UW Integrated Pest Management Program will offer a series of online webinar training sessions highlighting current crop management recommendations and are also designed to complement preparation for the state CCA exam. This webinar series is broadcast live via internet connection. Participants will be able to view the instructor's PowerPoint presentation on their computer screen and ask questions through their personal computer's microphone. Webinars will be broadcast each Monday, Wednesday and Friday from Dec. 2 to December 20, 2013. All webinars will start at 9:00 am and conclude by either 11:00 or 11:30. Please see the [webinar schedule](#) for a list of dates, speakers and topics.

The vast majority of workplace computers (newer computer and a fast internet connection) should be capable of handling webinar technology. A URL will be provided in advance to test hardware, sound and video capabilities. Online resources will also be provided to learn various webinar functions. Registration for the webinar series and electronic references is \$90/person. Credit card payments can be made online at

<https://www.patstore.wisc.edu/ipm/register.asp> Checks, payable to University of Wisconsin-Madison, are also acceptable. Send check, name, address, telephone number and email address (required) to Bryan Jensen, Dept. of Entomology, 1630 Linden Dr., Madison, WI 53706.

For questions, call or email Bryan Jensen at 608-263-4073, bmjense1@facstaff.wisc.edu For more information on the CCA program, international and state performance objectives and exam registration please go to the CCA website at <https://www.certifiedcropadviser.org/>

Scroll down to the end of this newsletter to view the schedule.

2014 IPM Field Scout Training Class

Bryan Jensen, IPM Program

The Madison Field Scout Training Classes will be held on the UW Madison Campus from January 6-10, 2014 (Friday, January 10th is an exam date and non-students aren't required to attend that day). The course is designed to provide the skills necessary for proper pest identification, crop scouting techniques as well as provide complimentary baseline information for people preparing for the state CCA exam. Additional information such as crop growth and development, pest life cycle, pest damage symptoms and economic thresholds will be covered. Pest control recommendations, although discussed, will not be highlighted during this course. Crops covered will include, corn, alfalfa, soybean and wheat. Click [here](#) for the course syllabus.

Non-student registration fee is \$225/person. To register for the IPM Scout School, make checks payable to University of Wisconsin-Madison and send to Bryan Jensen, Dept. of Entomology, 1630 Linden Dr., Madison, WI 53706. Online

registration can be made at:

<https://www.patstore.wisc.edu/ipm/register.asp>

For more information on this course please contact Bryan Jensen at:

Dept. of Entomology

1630 Linden Dr.

Madison, WI 53706

(608) 263-4073

bmjense1@facstaff.wisc.edu

Scroll down to the end of this newsletter to view the schedule.

UW-Extension/Madison Plant Disease Diagnostic Clinic (PDDC) Update

Brian Hudelson, Ann Joy, Erin DeWinter and Joyce Wu, Plant Disease Diagnostics Clinic

The PDDC receives samples of many plant and soil samples from around the state. The following diseases/disorders have been identified at the PDDC from October 5, 2013 through October 11, 2013.

Plant/Sample Type, Disease/Disorder, Pathogen, County

FIELD CROPS

Soybean, [Charcoal Rot](#), *Macrophomina phaseolina*, Ozaukee

Soybean, Fusarium Root Rot, *Fusarium* sp., Ozaukee

FRUIT CROPS,

Strawberry, [Root/Crown Rot](#), *Pythium* sp., *Rhizoctonia* sp., *Fusarium* sp., *Cylindrocarpon* sp., Taylor

VEGETABLES,

Ground Cherry, [Verticillium Wilt](#), *Verticillium* sp., Dodge

Potato, Bacterial Soft Rot, *Pectobacterium carotovorum*, Portage

Tomato, [Late Blight](#), *Phytophthora infestans*, Polk

SOIL,

Alfalfa Soil, Aphanomyces Seedling Blight, *Aphanomyces euteiches* race 2, Dane

Soybean Soil, Soybean Cyst Nematode, *Heterodera glycines*, Brown, Buffalo, Dunn, Eau Claire, Marquette

For additional information on plant diseases and their control, visit the PDDC website at pddc.wisc.edu.

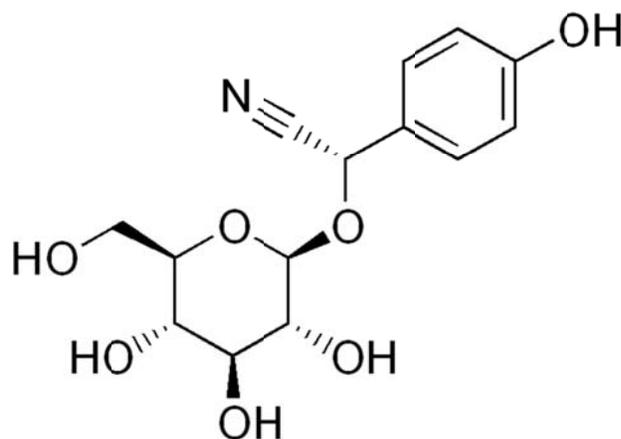
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Sorghums, and sorghum-sudangrass crosses may be poisonous if grazed or fed improperly. The danger of prussic acid poisoning is greatest for forage sorghum varieties, less for sorghum-sudangrass crosses, and least for sudangrasses.

The young, dark green growth or regrowth (less than 18 to 24 inches) the most dangerous stage. Shortly after frost, prussic acid release potential increases slightly. However, they can be safely grazed a few weeks after freezing if there is no substantial regrowth.

The amount of prussic acid is highest with high soil available nitrogen and/or low phosphorus.



Cyanogenic glucoside

Sorghums and sorghum-sudangrasses produce cyanogenic glucosides during when growing. The intact, bonded cyanide and glucosides are not themselves poisonous. However, the glucosides break down into glucose sugars by addition of water when certain enzymes are present. This breakdown process frees the cyanide from its chemical bond, and it becomes the toxic prussic acid. The enzymes involved in the hydrolysis, or chemical decomposition, usually are present in the same plant--but may be available from other sources. Digestive juices may cause the hydrolysis to occur.

Normally cyanogenic glucosides are physically separated from the enzymes that break the chemical bonds and release prussic acid. However, conditions that rupture plant cells to can allow the enzymes to convert the glucosides into prussic acid. Drought, freezing, cutting, chopping, chewing and maturity can contribute to plant cell rupture. The

highest potential for poisoning occurs when animals consume plant regrowth following a frost or drought.

Since prussic acid poisoning is very fast-acting, death will occur quickly. Watch animals closely for any signs of toxicity. Symptoms of prussic acid poisoning are gasping, staggering, trembling muscles, convulsions, and death resulting from respiratory failure. The mucous membranes of the mouth and eyes may have a blue coloration as evidence of cyanosis. In cases of recovery, there appears to be no permanent effects.

In all situations potential for problem is worst in sorghums and less in sorghum-sudangrasses with little potential for problems from sudangrass. The potential for problem in sorghum-sudangrasses may ranges from close to that of sorghum to little problem if the sorghum-sudangrass is more similar to sudangrass. Fall is a difficult time since repeated light frosts may continually rupture new cells and release prussic acid.

Recommendations:

In all cases, mixing with other feedstuffs reduces the problem compared to when the sorghum or sorghum-sudangrass is the sole source of feed.

Silage. Sorghum and sorghum-sudangrass silage is generally safe for feeding. Although it may have contained toxic levels of prussic acid when harvested, while in storage much of the poison escapes as a gas during fermentation and when being fed. However, as a precaution, do not feed new silage for at least 3 weeks after harvesting and storing.

Hay. The prussic acid content of sorghum and sorghum-sudangrass hay decreases as much as 75 percent while curing and is rarely hazardous when fed to livestock. Hay stored for two or more months gradually loses all its cyanide potential.

Greenchop or grazing. Do not graze sorghum or sorghum-sudangrass hybrids following a series of light frosts, as the potential for poisoning increases for a period of time after frosts. Allow 7 to 10 days after a light frost before feeding greenchop or grazing. Do not green-chop graze sorghum or sorghum-sudangrass hybrids following a killing frost until the plant has dried, approximately 7 days. Do not graze hungry livestock on sorghum or sorghum-sudangrass hybrids. Poisoning potential increases with the amount of high-risk forage consumed.

2013 CCA Pre-Test Training Webinar Schedule



Date	Instructor	Subject	Time
Monday, December 2	Bryan Jensen IPM Program	Introduction	9:00 -9:10
	Dr. Dan Undersander UW Agronomy	Forage Production	9:10-11 am
Wednesday, December 4	Dr. Joe Lauer UW Agronomy	Corn Production	9:00-11:00
Friday, December 6	Dr. Shawn Conley UW Agronomy	Small Grain and Soybean Production	9:00-11:00
Monday, December 9	Dr. Damon Smith UW Dept. of Plant Pathology	Field Crop Disease Management	9:00-11:00
Wednesday, December 11	Dr. Eileen Cullen UW Dept. of Entomology	Field Crop Insect Management	9:00-11:00
Friday, December 13	Dr. Vince Davis UW Agronomy	Weed Management	9:00-11:00
	Dr. Glenn Nice UW Pesticide Applicator Training Program	Rules and Regulations for Pesticide Application	11:00-11:30
Monday, December 16	Dr. Francisco Arriaga UW Soil Science	Soil and Water Management	9:00-10:30
	Dr. Carrie Laboski & Matt Ruark	Nutrient Management	10:30-11:30
Wednesday, December 18	Dr. Carrie Laboski & Dr. Matt Ruark UW Soil Science	Nutrient Management	9:00-11:30
Friday, December 20	Dr. Carrie Laboski & Dr. Matt Ruark UW Soil Science	Nutrient Management	9:00-11:15
	Bryan Jensen IPM Program	CCA Exam, Q &A	11:15-11:30

***Agronomy, Entomology, Horticulture, Plant Pathology,
Soil Science 354,
Diagnosing and Monitoring Pest and
Nutrient Status of Field Crops
(IPM Field Crop Scout Training Class)***

Monday, January 6, 2014

Room 104, Russell Labs

8:00	Bryan Jensen IPM Program	Introduction Rm. 184 Russell labs
8:15	Bill Kojis Dept. of Agronomy	Corn Growth and Development
9:00	John Gaska, Dept. of Agronomy	Soybean and Small Grain Growth and Development
10:30	Break	
10:45	Richard Proost, NPM Program	Consequences of Misidentifying Weeds
11:15	Bryan Jensen IPM Program	Corn Insect Lecture
12:00	Lunch (on your own)	
1:00	Bryan Jensen IPM Program	Corn Insect Lecture (cont.)
1:45	Dan Heider, IPM Program	Monocot Weed ID Lecture
2:30	Break (reconvene in lab)	
2:45	Dan Heider	Monocot Weed ID Lab, section 1, Rm. 128 Moore Hall (group 1)
2:45	Bryan Jensen	Corn Insect ID Lab, section 2, Rm 147 Russell Labs (group2)
3:45		
4:00	Dan Heider	Monocot Weed ID Lab, Section 2, , Rm. 128 Moore Hall (group 2)
4:00	Bryan Jensen	Corn Insect ID Lab, Section 1, Rm 147 Russell Labs (group 1)
5:00	Adjourn	
Tuesday, January 7, 2014		
Rm. 104 Russell labs		
8:30	Quiz	
9:00	Dan Heider	Annual Broadleaf Weed ID Lecture
10:00	Bryan Jensen	Alfalfa & Soybean Insect ID Lecture
10:15	Break (reconvene in labs)	
10:30	Dan Heider	Annual Broadleaf Weed ID Lab, section 1, Rm. 128 Moore Hall (group 1)
10:30	Bryan Jensen	Alfalfa and Soybean Insect ID Lab, section 2, Rm. 147 Russell Labs (group 2)
11:30	Lunch (on your own)	

12:30	Dan Heider	Annual Broadleaf Weed ID Lab, section 2, , Rm. 128 Moore Hall (group 2)
12:30	Bryan Jensen	Alfalfa and Soybean Insect ID Lab, section 1, Rm 147 Russell labs (group 1)
1:30	Break (reconvene in RM. 184 RL)	
1:45	Brian Hudelson, Dept. of Plant Pathology	Field Crop Disease Identification Rm. 184 Russell Labs
4:15	Adjourn	

WEDNESDAY, January 8, 2014 Go Directly to your Lab Session		
8:00	Brian Hudelson	Field Crop Disease Lab, Rm. 187 Russell Labs (group 1)
	Dan Heider	Biennial and Perennial Weed ID, Lecture and Lab, section 2, , Rm. 128 Moore Hall (group 2)
10:00	Brian Hudelson	Field Crop Disease Lab, Rm. 187 Russell Labs (group 2)
	Dan Heider	Biennial and Perennial Weed ID, Lecture and Lab, section 1, Rm. 128 Moore Hall (group 1)
12:00	Lunch (on your own)	
1:00	Vince Davis, Dept. of Agronomy	Herbicide Mode of Action and Injury Symptoms (Rm. 184 Russell Labs)
2:15	Break	
2:30	Dr. Francisco Arriaga, Dept. of Soil Science	Diagnosing Soil Compaction
3:15	Quiz	
3:45	Adjourn	
THURSDAY, January 9, 2014 Rm. 104 Russell labs		
8:30	Scott Sturgul Nutrient and Pest Management Program	<ul style="list-style-type: none"> • Soil Testing • Plant Tissue Testing • Nutrient Deficiency Symptoms
10:30	Break	
10:45	Scott Sturgul	An Introduction to Nutrient Management Planning
11:45	Lunch (on your own)	
12:45	Scott Sturgul	An Introduction to Nutrient Management Planning
1:30	Vince Davis	Trouble Shooting Crop Injury Symptoms
2:30	Quiz	

FRIDAY, January 10, 2014

104 Russell labs

8:30	ID Exam.(184 Russell Labs)
10:30 (approx.)	Adjourn